

REMARKS

Claims 1-26 are pending in this application. By this Amendment, claims 1-4, 6 and 7 are amended and claims 22-26 are added. Reconsideration based on the above amendments and following remarks is respectfully requested.

I. Claim Objections

The Office Action objects to claims 1-4, 6 and 7 because of informalities. Applicant respectfully submits that the amendments to these claims obviate the objections.

II. The Claims Define Allowable Subject Matter

A. Claim Rejections 35 U.S.C. §102

The Office Action rejects claims 1-4 and 6-21 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,353,435 to Kudo et al. (Kudo). Applicant respectfully traverses this rejection.

The Office Action asserts that, regarding claims 1 and 20, Kudo teaches that "a display drive circuit associated with a method comprising RAM, a plurality of grayscale pattern selection circuits". The Office Action cites col. 7, lines 29-31, col. 9, lines 33-38, Figs. 1 and 4. The Office Action also asserts that Kudo discloses "a plurality of grayscale pattern selection circuits (107, 108) select at least two frame cycles (Fig. 6, col. 10, lines 59-63); output a drive signal for a display portion (liquid crystal display 9, Fig. 1, col. 7, lines 25-32.)" Applicant respectfully traverses this rejection.

Applicant respectfully submits that Kudo fails to disclose or teach all of the features recited in claim 1. Specifically, Kudo fails to disclose or teach the feature wherein a plurality of grayscale pattern selection circuits, each selecting one grayscale pattern from a plurality of grayscale patterns based on data stored in the RAM.

The Office Action fails to state where Kudo discloses the selection of one grayscale pattern from a plurality of grayscale patterns based on the data stored in the RAM, as recited

in claim 1. In addition, the Office Action fails to even mention the feature of a plurality of frame selection circuits which are provided in correspondence with a plurality of grayscale pattern selection circuits, and sequentially output grayscale patterns selected by the plurality of grayscale pattern selection circuits for a series of image frames, as recited in claim 1.

Kudo merely discloses a frame selector circuit (write data selector) Fig. 3, 106, which outputs grayscale patterns selected by the plurality of grayscale pattern selection circuits.

Regarding claim 20, Applicant respectfully submits that Kudo fails to disclose or teach all of the features recited in claim 20. Specifically, Kudo fails to disclose the feature of selecting one grayscale pattern from among a plurality of grayscale patterns having at least two types of frame cycles based on data for image display and outputting the selected grayscale pattern for each frame, as recited in claim 20.

Kudo merely discloses outputting the grayscale pattern based upon the synchronous signals, DotCK, Hsync, Vsync and DispTMG. Thus, the selection is not based on data for image display, as recited in claim 20.

Regarding claim 6, the Office Action asserts that Kudo teaches "RAM (a frame memory 8, Fig. 1), a plurality of FRCROMs (FRC decoder 101 to 104, Fig. 3, col. 9, lines 27-30), different frame cycles (Fig. 6, col. 10, lines 59-63), a plurality of grayscale No. 1 to No. 64 pattern generator correspond to a plurality of selectors (108) (Fig. 4, col. 10, lines 12-50)." Applicant respectfully submits that Kudo fails to disclose or teach all of the features recited in claim 6.

Specifically, Kudo fails to disclose or teach the feature of a plurality of FRCROMs, which store a plurality of grayscale patterns with mutually different frame cycles, and use data stored in the RAM to select one grayscale pattern from among the plurality of grayscale patterns, as recited in claim 6. Furthermore, Applicant respectfully submits that FRCROMs are frame rate control read only memory circuits, which are not disclosed or taught in Kudo.

Kudo merely discloses frame rate control circuits (FRC) (see Fig. 3, 101 to 104), FRC decoders which consist of an FRC pattern generator, Fig. 4, 107, and a selector 108.

Applicant respectfully submits that since claims 2-5, 8-12 and 14-18 depend from claim 1, that these claims are allowable at least for the reasons stated regarding claim 1.

Applicant respectfully submits that since claims 7, 13 and 19 depend from claim 6, that these claims are allowable at least for the reasons stated regarding claim 6.

Applicant respectfully submits that since claim 21 depends from claim 20, that claim 21 is allowable at least for the reasons stated regarding claim 20.

Withdrawal of the rejection of claims 1-4 and 6-21 is respectfully requested.

B. Claim Rejections 35 U.S.C. §103

The Office Action rejects claim 5 under 35 U.S.C. §103(a) as being unpatentable over Kudo. Applicant respectfully traverses this rejection.

The Office Action asserts that as to claim 5, Kudo "teach a plurality grayscale number 1 to number 64 pattern generator correspond to a plurality of selectors (108) (Fig. 4, col. 10, lines 12-50)." The Office Action further asserts that "it would have been an obvious matter of design choice to make separable selector (108), since such a modification would have involved a mere chance in the making separable of a component because the selector (108) still select the grayscale patterns for liquid crystal display device (9). A making separable is generally recognized as being within the level of ordinary skill in the art. In addition, make separable of a well-known element is normally not directed toward patentable subject matter."

Applicant respectfully submits that Kudo does not disclose or teach all of the features recited in claim 5. Specifically, since claim 5 depends from claim 1, claim 5 is allowable at least for the reasons stated regarding claim 1.

Withdrawal of the rejection of claim 5 is respectfully requested.

C. New Claims

It is respectfully submitted that at least for the reasons stated regarding claims 1 and 6, specifically, Kudo fails to disclose or teach a grayscale pattern selection circuit which selects one frame rate control read only memory from among the plurality of frame rate control read only memory, based on data stored in the RAM.

Support for the added claims is as follows: The page and line numbers reflect locations in the specification.

Claim 22

Support for the random access memory is found at least on page 16, lines 7-8 and page 19, lines 19-27. Support for the frame rate control read only memory and grayscale pattern selection circuit is found at least on page 25, line 8 through page 27, line 4. Support for frame selection circuit is found at least on page 24, line 16 through page 25, line 7. Support for the grayscale patterns is found at least on page 26, lines 1-27 and support for the segment electrode drive circuit is found at least on page 25, line 8 through page 28, line 6 and Figs. 14 and 15.

Claim 23

Support for claim 23 is found at least on page 27, lines 1-4 and page 27, line 15 through page 28, line 1 and Figs. 1, 10 and 15.

Claim 24

Support for the first to third latch circuits and fourth to sixth latch circuits is found at least on page 14, line 25 through page 16, line 22 and Fig. 3.

Claim 25

Support for the frame selection circuit is found at least on page 23, line 24 through page 24, line 13 and Fig. 12.

Claim 26

Support for claim 26 is found at least on page 29, lines 5-22 and Fig. 16.

III. Conclusion

In view of the foregoing amendments and remarks, Applicant submits that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-26 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the Applicant's undersigned representative at the telephone number set forth below.

Respectfully submitted,



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Attachment:
Amendment Transmittal

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